Estimating run timing of Lake Clark sockeye salmon relative to other Kvichak River drainage populations.

Lake Clark of sockeye salmon provide a large component of the subsistence harvest in Iliamna, Lime Village, Newhalen, Nondalton, Pedro Bay and Port Alsworth. Recent reductions in escapement of Lake Clark stocks are partly responsible for lower subsistence harvest levels. Lake Clark and Iliamna Lake sockeye are also targeted in commercial fishery prosecuted in the Kvichak district. Understanding the run timing of the Lake Clark stock relative to other Kvichak River stocks may provide tool for managers to target stocks with harvestable surplus. The run timing of Lake Clark stocks is not well understood. In the first year of this three-year project, we analyzed 13 microsatellites and four SNPs on 1,668 fish captured on 12 days which represented a period when 77% of the run. We found proportions significantly larger than zero on all but two days and significant variation in the proportion of Lake Clark stocks through time, but no clear pattern indicating early or late arrival. In an add-on to this project we also tested and found no significant difference in the proportions of Lake Clark stocks from 400 out migrating smolt in the Kvichak River taken during two time periods three weeks apart in 2000.

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